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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/528,538	09/14/1995	NORIO KANEKO	35.61548	3035

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EXAMINER

CUNEO, KAMAND

ART UNIT PAPER NUMBER

2827

DATE MAILED: 05/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

8/528538

Applicant(s)

Mr

Examiner

Cuneo

Group Art Unit

2827

---The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address---

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 3/4/02.
- ☒ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-3, 22, 23 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-3, 22, 23 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☒ The proposed drawing correction, filed on 3/6/98 is ☒ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).
- *Certified copies not received: _____.

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

DETAILED ACTION

1. Considering the long prosecution history of this case and the repetition of the arguments, examiner contacted the attorney of record on (4/4/02) to request a personal interview in hope of bridging the understanding gap. This telephone call, however, did not result in an interview being scheduled.

Treatment of Claims Based on Prior Art

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 23, 2-3 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yurek et al. (US 5545613, hereafter referred to as Yurek) and Shi et al. (Swagged Superconducting Wires, hereafter Shi) and Paranthaman et al. (Formation of Anisotropic Tl-1212, Tl-2212, Tl-1223 and Tl-2223 Particles using Aerosol Flow Reacted Powders, hereafter Paranthaman).

Yurek discloses a wire of a superconductive material where the grains of the material are compact and adhered together (sintered and compact) with silver (claim 2) filling the voids of the superconductive material in Example 7 prepared with the oxide-metal composite of Example 2, placed in the inside of a metal tube (conductive material) and composing a wire, column 3 at lines 12-23, 63-67 and column 4 at lines 1-3. The particles of metallic material in the voids and on the surface are solid when the wire is cooled after manufacturing.

Yurek discloses the claimed invention except the composition of the conductive material, thereby the higher melting point of the conductive material. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to make the conductive material of the Yurek wire copper, gold or aluminum (claim 3), or an alloy thereof (claim 22), because it is well known in the superconducting arts to make the outer sheath of wires from these metals and their alloys, as evinced by Shi and Paranthaman. Selecting the conductive material as such necessarily makes the melting point of the conductive material higher than the solidified metallic material, silver (claim 23).

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yurek, as applied to claim 23 above, and Den et al. (US **5,512,538**, hereafter referred to as Den).

Yurek discloses the claimed invention except for the superconducting oxide being Ln-Sr-Cu-M-O. Yurek does state that the invention is applicable to any superconducting oxide, column 2 at lines 43-44. Den discloses this type of superconducting oxide, reference the abstract.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to use the superconductive oxide of Den to provide the superconductive material of Yurek, because this type of superconducting oxide is one of many oxides known in the art for making superconductive wires.

Response to Arguments

5. Applicant's argument has been carefully reviewed, but is not persuasive. Applicant argues that the device of Yurek does not have solidified metallic material on the outer surface of the oxide superconductor. Examiner does not understand this assertion. This superconducting material, like any

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other oxide material, forms are crystals within the metal matrix. Therefore, there will be metal on the outer surfaces of the oxide. Moreover, the metal must be solid, because at the temperature of the superconductor, almost all metals are solid.

Applicant notes that the outer surface of the wire includes oxide superconductor. Examiner disagrees. Nevertheless, even if the outside surface exposes some of the oxide, the core of the conductor still includes a line of oxide and the metal covers that portion of the oxide. The claims only require that the oxide "has solidified metallic material on its outer surface." There is no requirement that no oxide be exposed.

Applicant repeats the argument that Yurek teaches a hollow tube with a coating of superconductor on the inside. Therefore, Yurek and Yurek in view of Den do not disclose the claims. Again, examiner repeats her previous assertion that after careful review of the Yurek reference, she finds that Yurek disclose conductors in the form of solid wires, "[t]he alloy can be formed, e.g. into wire, ribbon, sheet, rod," column 1 at lines 36-37. He further states, "alloy powder is coextruded with a billet of a metal or metal alloy to yield a composite *wire, rod* or tube," column 3, line 66, through column 4, line 1. Therefore, Yurek clearly sets forth solid material in the form of a wire or rod.

Applicant concludes the arguments with the assertion that Den, Shi, and Paranthaman cannot provide the missing teachings of Yurek. Examiner notes that she does not agree with the characterization of the Yurek reference by applicant and believes that Yurek taken in light of Den, Shi and Paranthaman render obvious the claimed invention for the reasons recited in the rejection.

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Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Closing

7. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Examiner Kamand Cuneo at (703) 308-1233. Examiner Cuneo's supervisor is Examiner Jeffrey Gaffin whose telephone number is (703) 308-3301.



K. Cuneo
Primary Examiner Group 2841
May 18, 2002